

Amendments to the Claims:

This listing of claims will replace all prior versions, and listing, of claims in the application:

1. (Currently Amended) A computer system for applying mode bias to an input field of an electronic document of an application, the system comprising:

a ~~hierarchical based~~ mark-up language schema registry in communication with the application; and
an input engine in communication with the ~~hierarchical based~~ mark-up language schema registry, wherein the ~~hierarchical based schema~~ mark-up language schema registry is configured to receive[[s]] a schema name based on a hierarchical analysis of an a textual input to the input field from the application, locate[[s]] a grammar having a language setting, a locale setting and associated with the schema name, and send[[s]] the grammar to the input engine, wherein the grammar defines an appropriate input for the input field, and wherein the schema in mark-up language schema the registry is associated with a corresponding grammar by one of: referring to the corresponding grammar directly, mapping to the corresponding grammar, and encoding the corresponding grammar within the schema.

2. (Original) The system of claim 1 wherein the input engine is a speech recognition engine.

3. (Original) The system of claim 1 wherein the input engine is a handwriting recognition engine.

4. (Original) The system of claim 1 wherein the input engine is an input method editor (IME).

5. (Previously Presented) The system of claim 1 wherein the input engine is a keypad of a cellphone.

6. (Previously Presented) The system of claim 1 wherein the input engine is a gesture-based input method.

7. (Previously Presented) The system of claim 1 wherein the input engine is a sign language recognition engine.

8. (Currently Amended) The system of claim 1 wherein the ~~hierarchical-based~~ mark-up language schema registry comprises a schema database and a grammar database, wherein the schema database comprises a plurality of schema names and a plurality of pointers to grammars associated with the plurality of schema names and wherein the pointers point to the grammar database comprising a plurality of grammars.

9. (Original) The system of claim 1 wherein the grammar is a context free grammar.

10. (Original) The system of claim 1 wherein the grammar is a context sensitive grammar.

11. (Original) The system of claim 1 wherein the grammar is a regular expression.

12. (Original) The system of claim 1 wherein the grammar is a statistical language model.

13. (Cancelled)

14. (Currently Amended) The system of claim 1[[3]] wherein the grammar defines an appropriate input for the input field by defining a list of acceptable inputs for the input field.

15. (Original) The system of claim 1 wherein the input engine uses the grammar to receive input from a user of the application.

16. (Previously Presented) The system of claim 15 wherein the input engine further uses the grammar to bias the user's input toward a correct input for the input field.

17. (Original) The system of claim 15 wherein the input engine compares the input of the user to the grammar to determine whether the input matches and is an appropriate input.

18. (Original) The system of claim 17 wherein if the input engine determines that the input of the user does not match an appropriate input, then the input engines rejects the input and causes the application to display an error message to the user.

19. (Currently Amended) The system of claim 1 wherein the ~~hierarchical based~~ mark-up language schema registry is in communication with the application through a text service framework.

20. (Currently Amended) A computer system for applying mode bias to an input field of an electronic document of an application, the system comprising:

a ~~hierarchical based~~ mark-up language schema registry in communication with the application, the ~~hierarchical based~~ mark-up language schema registry operable to point to code for dynamically generating one or more grammars, wherein the one or more grammars are used to ~~identify an input method~~ define an appropriate input for the input field, and wherein each mark-up language schema in the registry is associated with a corresponding grammar by one of: referring to the corresponding grammar directly, mapping to the corresponding grammar, and encoding the corresponding grammar within the schema; and

an input engine in communication with the ~~hierarchical based~~ mark-up language schema registry, wherein the ~~hierarchical based~~ mark-up language schema registry receives a schema name from the application, locates an identifier of a grammar associated with the schema name and sends the identifier of the grammar to the input engine.

21. (Currently Amended) A computer-implemented method for applying mode bias to an input field of an electronic document of an application program module, the method comprising the steps of:

- determining that an insertion point is within the input field;
- determining a mode bias schema that is attached to the input field, wherein the determination of a mode bias schema uses a ranked list of mode bias schemas;
- dynamically generating one or more grammars based on the input field and a hierarchical-based mark-up language schema registry wherein the one or more grammars define an appropriate input for the input field;
- determining a grammar from the generated one or more grammars that is associated with the mode bias schema; and
- sending the grammar to an input engine wherein the input engine uses the grammar to receive input for the input field.

22. (Currently Amended) The method of claim 21 further comprising: wherein the input engine uses the grammar to receive input for the input field comprises receiving text at the insertion point and determining whether the received text matches an input type defined by the grammar and, if so, then displaying the text in the input field.

23. (Original) The method of claim 22 further comprising the step of:
if the text received at the insertion point does not match the input type defined by the grammar, then displaying an error message.

24. (Currently Amended) The method of claim 21 wherein ~~the step of~~ determining a grammar that is associated with the mode bias schema comprises:

- cross-referencing the mode bias schema in a schema database to determine the grammar that is associated with the mode bias schema.

25. (Currently Amended) The method of claim 24 wherein ~~the step of~~ sending the grammar to an input engine comprises retrieving the grammar from a grammar database and sending the grammar to the input engine.

26. (Cancelled)

27. (Currently Amended) A computer-implemented method for determining a semantic category of a string in an electronic document based upon a mode bias schema comprising ~~the steps of:~~

receiving an input string in the electronic document;
dynamically generating one or more grammars based on the input string, wherein the one or more grammars define an appropriate input for the input field;
retrieving a mode bias schema and an associated grammar, the mode bias schema associated with a ~~hierarchical-based~~ mark-up language schema registry, wherein each mark-up language schema in the registry is associated with the grammar by one of: referring to the grammar directly, mapping to the grammar, and encoding the grammar within the schema;
determining whether the input string conforms to the definition of input defined by the grammar;
if so, then associating the mode bias schema with the input string in the document;
and
saving the mode bias schema as a semantic category label in association with the input string.

28. (Currently Amended) The method of claim 27 further comprising ~~the step of~~ displaying a plurality of actions in association with the semantic category label.

29. (Original) The method of claim 27 wherein the mode bias schema and the associated grammar are retrieved from a schema registry.

30. (Original) The method of claim 27 wherein the mode bias schema comprises an XML schema.